

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a system capable of replicating a server copy of a resource stored on one or more servers with a client copy of the resource stored on one or more clients, a method for resolving a resource conflict so that the client copy of the resource can be updated to the one or more servers without overwriting any changes made to the resource by another client, the method comprising the steps of:

determining that a conflict exists between the server copy of the resource and the client copy of the resource if a server resource tag that is representative of the server copy of the resource does not match a client resource tag that is representative of the client copy of the resource;

determining, at the server, whether the server can resolve the conflict between the server copy of the resource and the client copy of the resource into a single version of the resource;

creating, by the server, a conflict resource containing information about the conflict between the server copy and the client copy of the resource, if the conflict cannot be resolved at the server;

evaluating, at the client, whether the conflict resource can be resolved into a single version of the resource in accordance with a schema of additional information, known to the client but not the server, regarding a client operation that created the conflict, if the conflict was not resolved at the server; and

presenting the conflict resource to a user if the conflict resource cannot be resolved by the client.

2-4. (Canceled).

5. (Original) A method as defined in claim 1, wherein the step of determining further comprises the step of resolving the conflict at the server.

6. (Original) A method as defined in claim 1, wherein the step of determining further comprises the step of comparing the client copy of the resource with the server copy of the resource.

7. (Original) A method as defined in claim 1, wherein the conflict resource comprises the server copy of the resource and the client copy of the resource.

8. (Original) A method as defined in claim 1, wherein the step of evaluating further comprises the step of resolving the conflict at the client in accordance with the schema.

9. (Original) A method as defined in claim 1, further comprising the steps of:
uploading the resolved conflict resource to the server; and
returning a new resource tag to the client from the server.

10. (Previously Presented) In a system having multiple copies of a resource, a method for detecting and resolving a conflict between a client copy of the resource and a server copy of the resource so that the client can upload the client copy of the resource to the server without overwriting any changes made to the server copy of the resource by another client, the method comprising the steps of:

receiving, from the client, a client resource tag at the server, wherein the client resource tag identifies a client version of the client copy of the resource;

determining, by the server, whether the client resource tag matches a server resource tag, wherein the server resource tag identifies a server version of the server copy of the resource;

determining that a conflict exists if the client resource tag does not match the server resource tag; and

executing a server level of conflict resolution between the client copy of the resource and the server copy of the resource at the server in order to resolve the server copy and client copy of the resource into a single version of the resource.

11. (Canceled).

12. (Previously Presented) A method as defined in claim 10, wherein the client resource tag is received at the server in a PUT method.

13. (Original) A method as defined in claim 10, further comprising the step of initiating the conflict detection from the client.

14. (Original) A method as defined in claim 10, wherein the step of executing a server level of conflict resolution further comprises the step of comparing the client copy of the resource with the server copy of the resource.

15. (Canceled).

16. (Original) A method as defined in claim 14, further comprising the step of resolving the conflict in accordance with a schema known to the server.

17. (Canceled).

18. (Previously Presented) A computer program product as defined in claim 40, wherein the conflict resource comprises the server copy of the resource.

19. (Previously Presented) A computer program product as defined in claim 40, wherein the conflict resource comprises the server copy of the resource and the client copy of the resource.

20. (Previously Presented) A computer program product as defined in claim 40, wherein the conflict resource comprises a set of differences existing between the server copy of the resource and the client copy of the resource.

21. (Previously Presented) A computer program product as defined in claim 40, wherein the conflict resource comprises information useful to the client for resolving the conflict.

22-23. (Canceled).

24. (Previously Presented) A computer program product as defined in claim 40, further comprising program code means for executing a server level of conflict resolution.

25. (Previously Presented) A computer program product as defined in claim 24, wherein the program code means for executing a server level of conflict resolution further comprises program code means for resolving the conflict.

26. (Canceled).

27. (Previously Presented) A computer program product as defined in claim 40, further comprising program code means for executing a client level of conflict resolution which comprises program code means for comparing the changes made to the client copy of the resource and the server copy of the resource.

28. (Previously Presented) A computer program product as defined in claim 40, further comprising program code means for uploading the resolved conflict resource to the server.

29. (Previously Presented) A computer program product as defined in claim 28, further comprising program code means for returning to the client a new resource tag, wherein the new resource tag identified the current version of the server copy of the resource and the client version of the resource.

30. (Canceled).

31. (Previously Presented) A computer program product as defined in claim 42, wherein a first level of conflict resolution is a server level of conflict resolution, a second level of conflict resolution is a client level of conflict resolution and a third level of conflict resolution requires an end user to resolve the conflict.

32. (Previously Presented) A computer program product as defined in claim 31, wherein the program code means for executing one or more levels comprises program code means for executing the server level of conflict resolution at the server.

33. (Previously Presented) A computer program product as defined in claim 31, wherein the program code means for executing one or more levels comprises program code means for executing the client level of conflict resolution at the client.

34. (Previously Presented) A computer program product as defined in claim 31, wherein the program code means for executing one or more levels comprises program code means for executing the third level of conflict resolution.

35. (Canceled).

36. (Previously Presented) A computer program product as defined in claim 42, wherein the program code means for executing one or more levels comprises program code means for resolving the conflict in accordance with a schema.

37. (Previously Presented) A computer program product as defined in claim 36, wherein the schema is known to the server.

38. (Previously Presented) A computer program product as defined in claim 36, wherein the schema is known to the client.

39. (Previously Presented) A computer program product as defined in claim 42, wherein the program code means for executing one or more levels comprises program code means for uploading the resolved resource to the server and transmitting a new resource tag to the client.

40. (Currently Amended) In a system capable of replicating a resource from one or more server to one or more clients, a computer program product for implementing a method of detecting and resolving resource conflicts so the one or more clients can upload the resource to the one or more servers without overwriting any changes made to the resource by another client, the computer program product comprising:

a computer readable medium carrying computer executable instructions for implementing the method, wherein the computer executable instructions comprise:

program code means for comparing a client resource tag with a server resource tag, wherein the client resource tag and the server resource tag are each representative of a version of the resource;

program code means for determining that no conflict exists between a client version of the resource and a server version of the resource if the client resource tag and the server resource tag match;

program code means for resolving a conflict at the server into a single version of the resource if the client resource tag and server resource tag fail to match;

program code means for creating a conflict resource containing information about the conflict between the server copy and the client copy of the resource, if the conflict cannot be resolved at the server;

program code means for resolving the conflict at the client into a single version of the resource by evaluating the conflict resource in accordance with a schemaadditional information, known to the client but not the server, regarding a client operation that created the conflict; and

program code means for presenting the conflict resource to an end user for conflict resolution if the client cannot resolve the conflict .

41. (Original) A computer program product as in claim 40, wherein the computer executable instructions further comprise program code means for:

uploading the resolved conflict resource to the server; and
providing the client with a new resource tag.

42. (Previously Presented) In a system capable or replicating a resource between a client and a server, a computer program product for implementing a method of detecting and resolving a conflict between a client copy of the resource and a server copy of the resource so that the client can upload the resource to the server without overwriting any changes made to the resource by another client, the computer program product comprising:

a computer readable medium carrying computer executable instructions for implementing the method, wherein the computer executable instructions comprise:

program code means for receiving a client resource tag at a server, the client resource tag identifying a client version of the client copy of the resource;

program code means for comparing, by the server, the client resource tag with a server resource tag that identifies a server version of the server copy of the resource;

program code means for determining that there is a conflict between the client copy of the resource and the server copy of the resource if the client resource tag does not match the server resource tag; and

program code means for executing one or more levels of conflict resolution until the conflict is resolved into a single version of the resource.

43. (Previously Presented) A computer program product as in claim 42, wherein the computer executable instructions further comprise program code means for:

executing a server level of conflict resolution to resolve a server copy of a resource and a client copy of a resource having one or more conflicts into a single version of the resource;

executing a client level of conflict resolution to resolve a server copy of a resource and a client copy of a resource having one or more conflicts into a single version of the resource; and

executing a third level of conflict resolution to thereby resolve a server copy of a resource and a client copy of a resource having one or more conflicts into a single version of the resource.